

# GP1706-4GC/4GVC

xPON CATV WiFi6 HGU(Home Gateway Unit)



## Overview

BDCOM GP1706-4GC/4GVC HGU is an intelligent home gateway terminal product launched by BDCOM for multi-service converged networks, integrating wireless and voice functionalities. This product is compatible with EPON and GPON networks, complying with ITU-T G.984/988, IEEE802.3ah international standards, Communication industry standards of the People's Republic of China GB/T 33845-2017 and YD/T 1475-2006, as well as China Telecom's EPON/GPON equipment technical requirements (CTC). It possesses excellent interoperability and operability, allowing seamless interconnection with leading OLT devices from industry manufacturers.

## Highlights

### Superior Access Performance

GPON: Downlink transmission rate of 2.5Gbps and uplink transmission rate of 1.25Gbps, enabling a splitting ratio of up to 1:128 when combined with OLT devices. Network coverage radius reaches up to 20KM.

EPON: Downlink transmission rate of 1.25Gbps and uplink transmission rate of 1.25Gbps, enabling a splitting ratio of up to 1:64 when combined with OLT devices. Network coverage radius reaches up to 20KM.

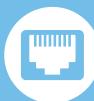
### Secure Business Carrying Capacity

With over 20 years of professional R&D expertise, BDCOM has developed targeted technologies including VLAN, ACL, QoS, and security filtering, as well as remote

management for WiFi/WAN/VoIP for BDCOM OLT. These technologies have endowed the ONU product with secure business carrying capacity.

### Precise Business Control Capability

Supports DBA and Rate-Limit functions, advanced dynamic bandwidth allocation mechanism, and precise bandwidth limitation functionality. Ensures optimal sharing of bandwidth resources (2.5Gbps for GPON network, 1.25Gbps for EPON network) among all users. Supports QoS functionality to ensure reliable service quality and prioritize different business needs in the network.



GPON and EPON autoadaptive



Efficient bandwidth usage and Ethernet services



The Splitting ratio up to 1:128

# Product Characteristics

## Rich Control Functions

Supports standard OMCI defined by ITU-T, standard OAM and extended OAM defined by telecom CTC2.1/3.0, including configuration, alarms, performance monitoring, fault isolation, and security management. Also supports BDCOM's proprietary OMCI and OAM, enabling enhanced business control when used with BDCOM OLT.

## Advanced Green Energy-Saving Technology

Derived from BDCOM advanced "GreenTouch" architecture and "Smart@CHIP" intelligent chip technology, it achieves deep energy-saving and low-carbon environmental protection, ensuring environmentally-friendly operations.

## Seamless Interoperability

Complies with ITU-T G.984.1/988, IEEE802.3ah international standards, Communication industry standards of the People's Republic of China GB/T33845-2017, YD/T 1475-2006, and China Telecom's EPON/GPON equipment requirements (CTC). It offers excellent interoperability and operability, ensuring smooth interconnection with industry-leading vendor OLT devices. Supports hybrid networking, minimizing network construction costs. Automatic switching between EPON and GPON networks enables a seamless transition from EPON to GPON.

# Model Lists

## GP1706-4GC

xPON CATV WiFi6 HGU(Home Gateway Unit)



- 1-Port SC/APC
- 4-Port Gigabit RJ45
- 1-Port RF(British System)
- 1-Port USB2.0
- 3000Mbps wireless

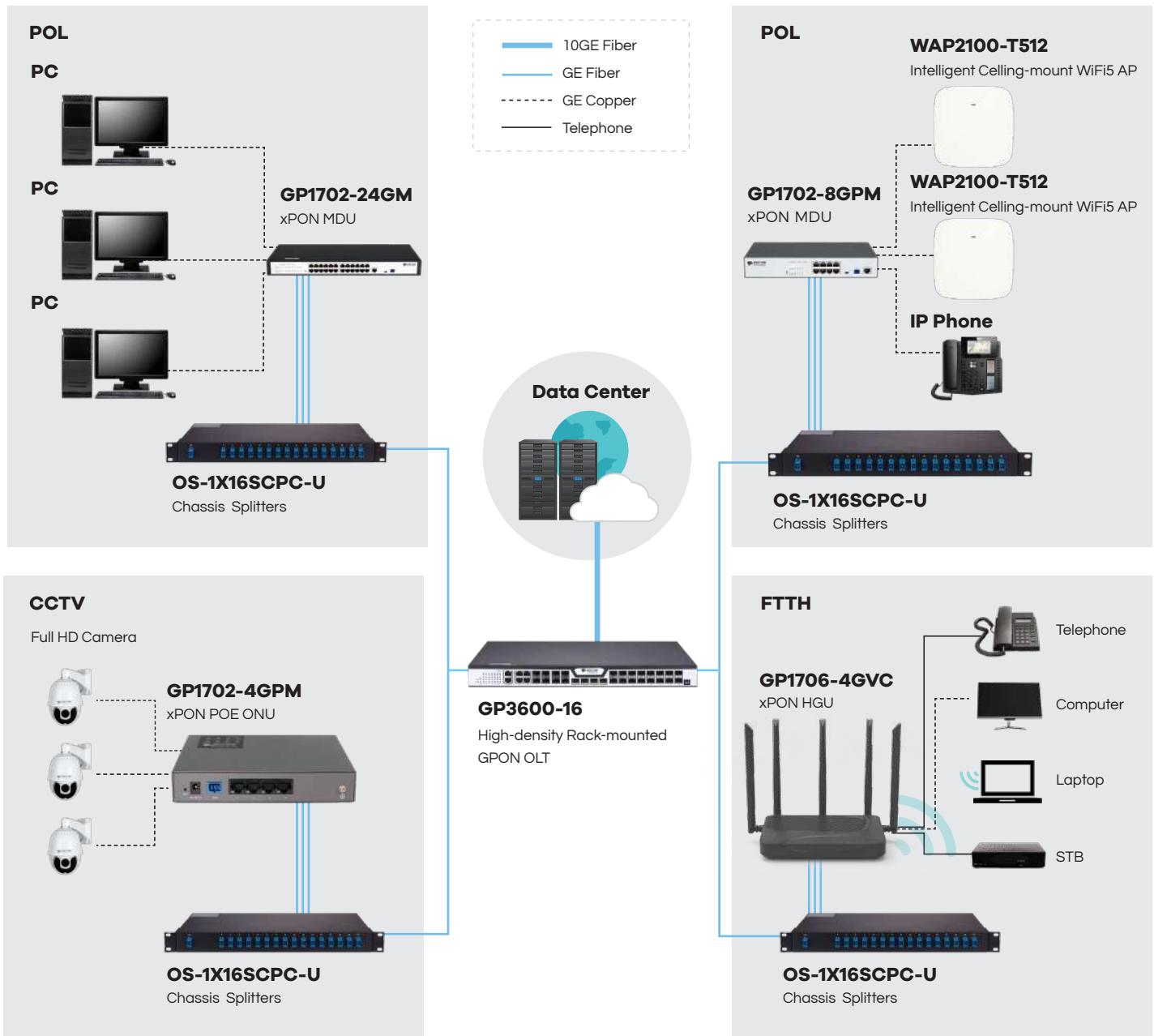
## GP1706-4GVC

xPON CATV WiFi6 HGU(Home Gateway Unit)



- 1-Port SC/APC
- 4-Port Gigabit RJ45
- 1-Port RJ11(POTS)
- 1-Port RF(British System)
- 1-Port USB2.0
- 3000Mbps wireless

# Application Diagram



## System Performance

Item	GP1706-4GC	GP1706-4GVC
<b>Service interface</b>		
PON ports	1-Port SC/APC	1-Port SC/APC
UNI ports	4-Port Gigabit RJ45	4-Port Gigabit RJ45
WIFI	3000Mbps	3000Mbps
Voice	/	1
USB2.0	1	1
Optical power	TX power: 0.5~5dBm RX sensitive: <-28dBm	0.5~5dBm <-28dBm
CATV	TX level: ≥70dbuv Receiver AGC Range: -15~-5dbm	≥70dbuv -15~-5dbm
<b>Power supply</b>		
AC adaptor	Input: 100-240V AC Output: 12V/1.5A	Input: 100-240V AC Output: 12V/1.5A
Max. consumption (W)	18W	18W
<b>Appearance</b>		
Chassis	Dimensions (WxDxH mm): 185x135x36 Weight(Kg)(empty): 0.3	185x135x36 0.3
<b>Environmental Specifications</b>		
Operating	Temperature: -0°C -45°C Humidity: 10%~85% (non-condensing)	-0°C -45°C 10%~85% (non-condensing)
Storage	Temperature: -40°C -85°C Humidity: 5%~95% (non-condensing)	-40°C -85°C 5%~95% (non-condensing)
<b>System capacity</b>		
Accessories	Power adaptor	Power adaptor

# Technical Specifications

## Standards

- ITU-T G.984/G.988
- IEEE802.3ah
- GBT33845-2017, YD/T 1475-2006
- IEEE 802.1Q, VLAN
- ITU-T Y.1291

## VLAN

- 4K VLAN
- Port based VLAN
- IEEE 802.1Q VLAN
- Tag/Transparent/Aggregation /Trunk/Translation mode VLAN
- CTC2.0 defined VLAN

## IP Service

- DHCP server/client
- Routing/Bridging/Hybrid mode
- DNS, DDNS
- PPPOE
- NAT/NAPT

## xPON Service

- AES128 algorithm encryption
- MAC/Loid/Hybrid authentication

## QoS

- Backpressure flow control (half-duplex)
- IEEE 802.3x flow control (full duplex)
- Against Head of Line mechanism
- IEEE 802.1p, CoS
- Four priority queues on each port
- WR, SP and FIFO queue schedule algorithms
- Port rate limit
- SLA and DBA

## Management

- Management modes including CLI, HTTP, SNMP, TR069 and TELNET
- Software upgrade through TFTP and WEB, OMCI, etc.
- Local or server syslog

## Voice Service

- SIP, T.38 FAX
- Three-way calling
- Call waiting
- Hot-line calling

## Network Security

- MAC address number limit
- MAC filter
- Port protect

## Multicast

- IGMP-Snooping
- CTC defined dynamic multicast function
- MLD-Snooping
- Multicast group limitation
- Multicast fast-leave

## Reliability

- Loop detection
- Dying-Gasp
- TX/RX optical power alarm

## Wireless

- 802.11b/g/n/ac/ax
- 2x2 MIMO
- Multi SSID
- SSID encryption
- Wireless channel (configurable)

# Ordering Information

Model	Description
GP1706-4GC	xPON CATV WiFi6 HGU, 1-Port GPON/EPON(SC/APC), 4-Port Gigabit RJ45 + 1-Port RF(British System), 1-Port USB2.0, dual band 3000M WiFi6, 5 external antennas, plastic casing, DC12/1.5A power adapter.
GP1706-4GVC	xPON CATV WiFi6 HGU, 1-Port GPON/EPON(SC/APC), 4-Port Gigabit RJ45 + 1-Port RJ11(POTS) + 1-Port RF(British System), 1-Port USB2.0, dual band 3000M WiFi6, 5 external antennas, plastic casing, DC12/1.5A power adapter.

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